#### Message

From: Galloway, Rick (DNREC) [Rick.Galloway@state.de.us]

**Sent**: 3/22/2018 6:34:02 PM

**To**: Garvin, Shawn M. (DNREC) [Shawn.Garvin@state.de.us]

CC: Gordon, Stephanie A. (DNREC) [Stephanie.Gordon@state.de.us]; Crofts, Marjorie A. (DNREC)

[Marjorie.Crofts@state.de.us]; Barnekov-Short, Kristin (DNREC) [Kristin.Bshort@state.de.us]; BorinOgden, Lisa

(DNREC) [Lisa.BorinOgden@state.de.us]; Chase, Kelley [Chase.Kelley@epa.gov]; Rovira, Eduardo

[Rovira.Eduardo@epa.gov]; Reese, Leslie (DNREC) [Leslie.Reese@state.de.us]; Ratsep, Timothy T. (DNREC)

[Timothy.Ratsep@state.de.us]; O'Loughlin, Connor [oloughlin.connor@epa.gov]; 'vikkiprettyman@townofblades.com' [vikkiprettyman@townofblades.com]

Subject: RE: Blades Update

Attachments: Results and Screen intervals\_032218.xlsx; Sample\_loc\_map\_Results\_03092018.pdf; Sample\_loc\_map\_03092018.pdf

Shawn,

Here are my responses to your questions-

Can I get an update on where we are with the private well samples? I am interested in if we have all the samples back. EPA sampled 45 private wells and got results back from 45 private wells.

Where we are with outreach to those that never responded to sampling requests that are in the .5 mile radius. On Monday 3/19/18, EPA sent out letters to the remaining properties that we think had wells within the red AOI (0.5 miles) but had not been sampled because they had not contacted EPA or DNREC.

### The status of mapping these locations

See the attached figures from EPA. The map does not include the last residence sampled but the sample was a non-detect for PFOA/PFOS.

### A discussion on what the sampling is telling us.

We know that the contaminated groundwater is southwest of the Blades wells. It doesn't appear at this point that we need to expand the sampling perimeter. We have some well depths especially in the impacted private wells but it is not enough to draw conclusions.

## What is the plan on the remedial side?

DNREC has been talking to Connor O'Loughlin, EPA Site Assessment Manager. In the next few months, he is planning to conduct a Site Inspection that will include installation of wells on and around Procino and Peninsula Plating. I will let him fill you in on any additional details.

Vikki raised a question about flushing the raw water out of the Blades Town wells when they do maintenance and if they can discharge to the ground. Keith Mensch stated that the only option was to discharge to the ground or put it through Seaford's wastewater treatment. We should probably discuss the options.

Please let me know if you have any additional questions. Thanks.

Rick Galloway, P.G.
Hydrologist, Project Manager
Site Investigation and Restoration Section
Dept. of Natural Resources and Environmental Control
391 Lukens Drive
New Castle, DE 19720-2774

Phone Number: (302) 395-2614 Fax Number: (302) 395-2601 From: Garvin, Shawn M. (DNREC)

Sent: Wednesday, March 21, 2018 4:58 PM

To: Galloway, Rick (DNREC) < Rick.Galloway@state.de.us>

Cc: Gordon, Stephanie A. (DNREC) < Stephanie.Gordon@state.de.us>; Crofts, Marjorie A. (DNREC)

<Marjorie.Crofts@state.de.us>; Barnekov-Short, Kristin (DNREC) <Kristin.Bshort@state.de.us>; BorinOgden, Lisa

(DNREC) <Lisa.BorinOgden@state.de.us>; Chase, Kelley <Chase.Kelley@epa.gov>; Rovira, Eduardo

(Rovira.Eduardo@epa.gov) <Rovira.Eduardo@epa.gov>; Reese, Leslie (DNREC) <Leslie.Reese@state.de.us>; Ratsep,

Timothy T. (DNREC) <Timothy.Ratsep@state.de.us>; oloughlin.connor@epa.gov

Subject: Blades Update

Can I get an update on where we are with the private well samples? I am interested in if we have all the samples back, where we are with outreach to those that never responded to sampling requests that are in the .5 mile radius, the status of mapping these locations, a discussion on what the sampling is telling us, what is the plan on the remedial side, etc. I know that folks are currently dealing with the snow, but when everyone is up and running, let's schedule a conversation. Thanks!

Sent from my iPhone

On Mar 13, 2018, at 2:59 PM, Galloway, Rick (DNREC) <Rick.Galloway@state.de.us> wrote:

After talking to Kelley, I believe that there is only one well results left. The sample was just collected on March 9. Kelley or Steph, please correct me if I am wrong.

**From:** Gordon, Stephanie A. (DNREC) **Sent:** Tuesday, March 13, 2018 3:55 PM

To: Crofts, Marjorie A. (DNREC); Garvin, Shawn M. (DNREC); Barnekov-Short, Kristin (DNREC);

BorinOgden, Lisa (DNREC)

Cc: Galloway, Rick (DNREC)

Subject: RE: PFC data 2.27-28.18

FYI - EPA just clarified that the well in town Ex. 6 Personal Privacy (PP) is not used for drinking water. See Kelley's email below:

## Good afternoon -

Ex.6 Personal Privacy (PP) the owner of the property at Ex.6 Personal Privacy (PP) called me back. As a reminder, this is sample location—which had a combined concentration of PFOA/PFOS of 58 ppt.

Ex. 5 Personal Privacy (PP) let me know that the well is not connected to the home and is not used for drinking water. The home is served by Blades public water.

As such, he will not need to install a filter.

For your info - the well at this location was installed for the purposes of irrigation. He confirmed that the two-inch well was installed to a depth of approximately 50 feet in the early 90s maybe 1991/1992 timeframe.

Thank you – Kelley

From: Crofts, Marjorie A. (DNREC) Sent: Tuesday, March 13, 2018 3:50 PM

**To:** Garvin, Shawn M. (DNREC) < Shawn.Garvin@state.de.us>; Barnekov-Short, Kristin (DNREC) < Kristin.Bshort@state.de.us>; BorinOgden, Lisa (DNREC) < Lisa.BorinOgden@state.de.us>

**Cc:** Galloway, Rick (DNREC) < <u>Rick, Galloway@state.de.us</u>>; Gordon, Stephanie A. (DNREC)

<Stephanie.Gordon@state.de.us>
Subject: RE: PFC data 2.27-28.18

Shawn,

One is along to see if the same general area of the other hits we have gotten. The other is in town and southeast of the town wells. We are trying to get ahold of EPA to see if this is still used for drinking water.

Marj

From: Garvin, Shawn M. (DNREC) Sent: Tuesday, March 13, 2018 3:43 PM

To: Crofts, Marjorie A. (DNREC) < Marjorie. Crofts@state.de.us>; Barnekov-Short, Kristin (DNREC)

< Kristin.Bshort@state.de.us>; BorinOgden, Lisa (DNREC) < Lisa.BorinOgden@state.de.us>

**Subject:** RE: PFC data 2.27-28.18

What does it tell us?

From: Crofts, Marjorie A. (DNREC) Sent: Tuesday, March 13, 2018 2:47 PM

**To:** Barnekov-Short, Kristin (DNREC) < <a href="mailto:kristin.Bshort@state.de.us">kristin.Bshort@state.de.us</a>; BorinOgden, Lisa (DNREC) < <a href="mailto:kristin.Bshort@state.de.us">kristin.Bshort@state.de.us</a>; Garvin, Shawn M. (DNREC) < <a href="mailto:kristin.Bshort@state.de.us">kristin.Bshort@state.de.us</a>; Garvin, Shawn M. (DNREC) < <a href="mailto:kristin.Bshort@state.de.us">kristin.Bshort@state.de.us</a>; Carvin, Shawn M. (DNREC) < <a href="mailto:kristin.Bshort@state.de.us">krist

Subject: FW: PFC data 2.27-28.18

From: Galloway, Rick (DNREC)

**Sent:** Tuesday, March 13, 2018 2:24 PM

**To:** Crofts, Marjorie A. (DNREC) < <u>Marjorie.Crofts@state.de.us</u>>; vikkiprettyman@townofblades.com

Subject: FW: PFC data 2.27-28.18

These just came in.

From: Rovira, Eduardo [mailto:Rovira.Eduardo@epa.gov]

**Sent:** Tuesday, March 13, 2018 2:20 PM

To: Galloway, Rick (DNREC); Gordon, Stephanie A. (DNREC); Salahuddin, Qazi (DNREC); Ratsep,

Timothy T. (DNREC); Bethard, Jamie (DNREC)

Cc: Chase, Kelley; Vikki Prettyman; Towle, Michael

Subject: FW: PFC data 2.27-28.18

Hello,

Please see attached and below.



Kelley / Rick, please call the two above, I will call the other residents.

# Eduardo

From: Ewald, Matt [mailto:Matt.Ewald@WestonSolutions.com]  Sent: Tuesday, March 13, 2018 1:03 PM  Fo: Rovira, Eduardo < <u>Rovira.Eduardo@epa.gov</u> >; Chase, Kelley < <u>Chase.Kelley@epa.gov</u> >  Subject: PFC data 2.27-28.18	
All,	
Below and attached are the results for samples collected on the 27 <sup>th</sup> and 28 <sup>th</sup> . Locations Ex. 6 Personal Privacy (PP) / Ex. 9 Fall into the resample category and locations Ex. 6 Personal Privacy (PP) / Ex. 9 Wellis had low detections. I will go ahead and update the results table and send this information to GIS so they can update the map. Please let me know if you have and questions.	Wells
Location Ex. 6 Personal Privacy (PP) / Ex.9 Wells	
Perfluorooctane sulfonic acid	4
Perfluorooctanoic acid	3.
Perfluorononanoic acid	-
Perfluorohexanesulfonic acid	
Perfluoroheptanoic acid	1.
Perfluorobutanesulfonic acid	
Location Ex. 6 Personal Privacy (PP) / Ex. 9 Wells	
Perfluorooctane sulfonic acid	
Perfluorooctanoic acid	2.
Perfluorononanoic acid	
Perfluorohexanesulfonic acid	
Perfluoroheptanoic acid	
Perfluorobutanesulfonic acid	
ocation Ex. 6 Personal Princety (1997) Ex. 8 Weeks   Duplicate	
Perfluorooctane sulfonic acid	
Perfluorooctanoic acid	2.8/3.
Perfluorononanoic acid	
Perfluorohexanesulfonic acid	
Perfluoroheptanoic acid	
Perfluorobutanesulfonic acid	
ocation statement to the second control of t	
Perfluorooctane sulfonic acid	5
Perfluorooctanoic acid	
Perfluorononanoic acid	
Perfluorohexanesulfonic acid	-
Perfluoroheptanoic acid	1
Perfluorobutanesulfonic acid	

Location Ex. 6 Personal Privacy (2019) (E. 6. Weels		
Perfluorooctane sulfonic acid		
Perfluorooctanoic acid		
Perfluorononanoic acid		
Perfluorohexanesulfonic acid		
Perfluoroheptanoic acid		

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Perfluorobutanesulfonic acid

9.9